

## **ABSTRACT**

A process for the synthesis of arborescent polymers comprises epoxidation of a first polymer and grafting thereto a second polymer having groups reactive to the epoxide groups on the first polymer. The epoxidation and grafting steps can be repeated. In an additional embodiment, the present invention provides a one-pot method for the synthesis of arborescent polymers. In a reaction pot, a first polymer is copolymerized and then reacted with an activating compound in order to generate a polyfunctional macroinitiator. Monomers are then added to the reaction pot, the monomers having functional groups reactive towards reactive sites on the first polymer.